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## SCREENING OF STREPTOCOCCUS SUIS SEROTYPE 2 RESISTANCE GENES IN MICE WITH SNP AND TRANSCRIPTOMIC MICROARRAY

**Hongjie Fan, Hong Zhou and Xiaomeng Pei**

Nanjing Agricultural University, China

**S***treptococcus suis* serotype 2 (S. suis 2, SS2) is the major pathogen of swine Streptococcosis. It is not only significantly restricts the development of swine industry all over the world, but also threatens the health of human beings. Among the existing 33 serotypes (1-31, 33, 1/2), SS2 has the highest toxicity and is mostly widely spread. Though the virulence factors of SS2 has been largely studied, rare researches focusses on the host side, far less is known about the specific genes associated with host susceptibility. In this study, we aimed at identifying genes associated with susceptibility to SS2 through Single Nucleotide Polymorphisms (SNP) genotyping chips and gene transcription chips. First, we determined the differential susceptibility between A/J mice and C57BL/6 mice and generated F2 progeny from them. Then we obtained genomic DNA samples from F2 progeny and adopted SNP genotyping chips to locate significant SNPs with the samples. Next, we collected blood samples from A/J mice and C57BL/6 mice at different hours after injection and used the blood samples to identify differentially expressed genes through gene expression profiling. Finally, to further screen genes associate with susceptibility to SS2, we integrated results of significant SNPs and different expression genes (DEGs) and determined candidate genes, which need functional research in the future.

### Biography

Hongjie Fan has completed his PhD in Preventive Veterinary Medicine from Nanjing Agricultural University. He then worked in Nanjing Agricultural University. His major professional interests focus on Veterinary Microbiology and Immunology. He has been Investigator of more than 20 projects which involves Swine Streptococcosis, pathogenesis of Salmonella and rapid detection and vaccine development of porcine epidemic diarrhea virus. He has published more than 150 articles in journals. As a corresponding author, he has published more than 50 SCI papers. He has won the second prize of National Scientific and Technological Progress Award. His team has been selected outstanding talents and innovative team of Agricultural Scientific Research by Ministry of Agriculture.

fhj@njau.edu.cn